

# INSTRUCTIONAL TIME AND ELEMENTARY STUDENT ACHIEVEMENT

Prepared for Muscogee County School District

August 2018



In the following report, Hanover Research explores the association between instructional time and elementary student outcomes. We include a discussion of the available academic literature and provide Muscogee County School District with a series of district profiles.

# TABLE OF CONTENTS

- Executive Summary.....3**
  - Introduction .....3
  - Key Findings .....4
  - Recommendations.....4
- Section I: Length of the Instructional Day..... 5**
  - Defining “Extended Learning” .....5
  - Review of the Literature .....5
    - Potential Benefits of ELT.....6
    - Potential Concerns About ELT .....9
  - Preliminary ELT Implementation Considerations .....10
- Section II: District Profiles..... 12**
  - Orchard Gardens K-8 School.....12
  - Meriden Public Schools .....15
  - Matthew J. Kuss Middle School .....16

# EXECUTIVE SUMMARY

## INTRODUCTION

Educators, policy makers, legislators, and other stakeholders have long sought to identify the association between learning time and student outcomes.<sup>1</sup> Proponents of extended learning time posit that longer school days more effectively eliminate inequity across student groups, increase academic achievement, and better align with working parents' schedules. In contrast, critics of longer school days cite drawbacks such as exorbitant operating costs, unproven benefits, and inattentive students.<sup>2</sup>

In 2009, roughly 650 schools across the United States operated with extended learning hours—as of 2016, close to 1,500 school districts had adopted longer school days.<sup>3</sup> In recent years, extending the school day has become a viable policy option for school leaders interested in improving disadvantaged students' learning outcomes and decreasing pressure on teachers to fit too much into a single lesson plan.<sup>4</sup>

Like other school districts across the country, Muscogee County School District (Muscogee) seeks to identify the relationship between the length of the school day and student achievement. Specifically, Muscogee leadership is considering increasing the elementary school day from six hours and 15 minutes to seven hours, and seeks evidence as to whether this longer school day would help or hinder student outcomes. In the following report, Hanover Research (Hanover) discusses how the length of the instruction day affects student outcomes such as student achievement:

- **Section I** discusses the impact of extended learning time on students and provides Muscogee with considerations and guiding questions for implementing extended learning time.
- **Section II** provides profiles of three districts that have lengthened the school day and seen improvements in student outcomes.

---

<sup>1</sup> Woods, J.R. "Instructional Time Trends." Education Commission of the States, August 2015. p. 2.  
[https://www.ecs.org/wp-content/uploads/Instructional-Time-Trends\\_revised-1.pdf](https://www.ecs.org/wp-content/uploads/Instructional-Time-Trends_revised-1.pdf)

<sup>2</sup> "Should the School Day Be Longer?" The New York Times, September 26, 2011.  
<https://www.nytimes.com/roomfordebate/2011/09/26/should-the-school-day-be-longer>

<sup>3</sup> Walker, T. "A 9 to 5 School Day: Are Longer Hours Better for Students and Educators?" NEA Today, November 22, 2016. <http://neatoday.org/2016/11/22/longer-school-days/>

<sup>4</sup> Riggs, L. "Kids Who Spend All Day at School." The Atlantic, May 30, 2014.  
<https://www.theatlantic.com/education/archive/2014/05/extended-school-days/371896/>

## KEY FINDINGS

- **Empirical evidence focusing on the association between extended school days and elementary students is limited and presents mixed findings.** Most of the available literature reviews student outcomes across Grades K-12, rather than solely focusing on one grade level or band. Several studies have found that extended school days may improve student achievement, while other studies have found that extended school time has no effect on achievement. No studies, however, have found a negative impact on student achievement as a result of extended learning time.
- **Additional instructional time more significantly benefits disadvantaged students.** Extended learning time is generally associated with improved achievement for low-income students, English Language Learners, and racial/ethnic minority students. Positive effects for these students occur in math and English language arts. However, the positive effects for high-achieving students are minimal.
- **Increased instructional time alone is not sufficient to improve student academic achievement.** Rather, schools should take a series of measures to ensure that students receive quality instruction. Although several empirical studies suggest that lengthening the school day may improve student outcomes across all grade levels, these findings come with several caveats. Specifically, schools must ensure that additional classroom time is used well and that teachers have sufficient training and resources to realize a value-add for this extra time. Schools should not solely lengthen the school day but should explicitly articulate how longer school hours will advance student outcomes and schedule additional professional development and planning for teachers, and coordinate instruction and enrichment activities accordingly.

## RECOMMENDATIONS

- **Because extended learning time represents a significant investment, district leaders may consider conducting a cost-benefit analysis prior to implementing extended learning.** The adoption of an extended school day typically necessitates additional resources. Specifically, teachers may require more compensation, the school building(s) must remain open for longer periods of time, and student transportation schedules will change. A cost-benefit analysis can identify how the expected student outcomes compare with the additional fiscal, human, and facilities resources needed for longer instructional days.

## SECTION I: LENGTH OF THE INSTRUCTIONAL DAY

This section reviews empirical studies examining the association between the length of the instructional day and elementary student outcomes. We first provide Muscogee with a review of the research and then discuss preliminary implementation considerations and guiding questions to frame potential planning discussions.

### DEFINING “EXTENDED LEARNING”

Education researchers and practitioners use a variety of acronyms and phrases to describe additional instructional time. These terms may include “extended learning opportunities,” “extended learning time,” and “increased learning time.” However, “regardless of the acronym, the assertion behind extended learning time is simple: to improve student learning, [schools] need to increase learning time for students and teachers.”<sup>5</sup> Throughout the remainder of this report, we limit our analysis to extended school days—which does not include Saturday school or additional school days added on to a district calendar—and refer to extended school day instruction as ELT.

Public school students across the United States typically attend school for 6.5 hours per school day, for 180 days per year, and receive classroom instruction between 720 and 1086 hours each academic year.<sup>6</sup> In 2015, the National Center on Time and Learning (NCTL)—the preeminent ELT technical assistance group and nonprofit education research organization that examines the impact of longer instructional time and modified school schedules—published a series of qualifying factors that indicate whether a school is an ELT school. To be considered an ELT school, **the NCTL mandates that schools must “have at least 30 minutes more time per day and/or 10 more days per year than a comparison public school.”**<sup>7</sup>

### REVIEW OF THE LITERATURE



**Researchers cannot conclusively discern whether ELT correlates with improved student outcomes.**<sup>8</sup> Confounding factors such as teacher quality, student characteristics, and quality of instructional time make it difficult to identify a causal relationship between ELT and student outcomes.<sup>9</sup> Certain empirical studies suggest that longer school days can have dramatic improvements on student outcomes, while other studies suggest that ELT has no effect on student achievement.<sup>10</sup>

---

<sup>5</sup> “Critical Success Factor Planning Guide: Increased Learning Time.” Texas Education Agency and Texas Center for District and School Support. p. 4. <http://www.taisresources.net/wp-content/uploads/2014/10/Increased-Learning-Time-Planning-Guide.pdf>

<sup>6</sup> “A Review of Research on Extended Learning Time in K-12 Schools.” Chalkboard Project, August 2008. p. 1. <https://chalkboardproject.org/sites/default/files/Extended-Learning-2.pdf>

<sup>7</sup> Farris-Berg, K., L. Nazareno, and B. Berry. “Defining the Next Generation of Expanded Learning Time: Teacher Leader Perspectives on School Time.” Center for Teaching Quality, National Education Association. p. 3. [https://www.teachingquality.org/wp-content/uploads/2018/04/Defining\\_the\\_next\\_generation\\_of\\_expanded\\_learning\\_time.pdf](https://www.teachingquality.org/wp-content/uploads/2018/04/Defining_the_next_generation_of_expanded_learning_time.pdf)

<sup>8</sup> Ibid.

<sup>9</sup> “A Review of Research on Extended Learning Time in K-12 Schools,” Op. cit., p. 1.

<sup>10</sup> Woods, Op. cit., p. 2.

In the following subsections, we discuss the benefits and drawbacks associated with extended learning time. We first summarize the potential benefits of ELT, and then discuss common concerns stakeholders have about increasing the length of the instructional day.

## POTENTIAL BENEFITS OF ELT

**+** **Experts cite a host of potential benefits associated with ELT** (Figure 1.1). Teachers have additional time to reinforce key concepts, and they can introduce ideas across a broader range of mediums to incorporate different learning styles (i.e., act out a scene, perform a lab experiment). Students can benefit by receiving more one-on-one attention and additional academic supports beyond those available during traditional school hours.<sup>11</sup>

**Figure 1.1: Potential Benefits of ELT**

Students	Teachers	Schools
<ul style="list-style-type: none"> <li>•Receive more one-on-one instruction</li> <li>•Learn in longer blocks, which emphasizes subject content</li> <li>•Can develop portfolios of their work</li> <li>•Can experience hands-on learning activities such as science labs and projects that facilitate learning through application</li> </ul>	<ul style="list-style-type: none"> <li>•Can engage in more high-quality professional development</li> <li>•Can participate in support activities such as mentoring</li> <li>•Can plan and work collaboratively with others in greater depth</li> <li>•Can analyze data to improve instruction and student achievement</li> </ul>	<ul style="list-style-type: none"> <li>•Can develop community-based partnerships - which can strengthen educational curriculum</li> <li>•For example, if there are seven learning periods in the day, one of them may be led by a community partner such as the Boys and Girls Club or a community college</li> <li>•A local organization such as a hospital or museum could teach a monthly class at their facility</li> </ul>

Source: Center for American Progress and Texas Education Agency<sup>12</sup>

## REVIEWS AND META-ANALYSES

**A recent systematic review and meta-analysis suggest that ELT may lead to improved student learning in certain circumstances.** A 2014 meta-analysis by the American Institutes for Research found that ELT leads to small improvements in literacy and math achievement. The authors of this meta-analysis reviewed 30 experimental studies and found that ELT programs had a small but statistically significant, positive effect on elementary students' achievement. Positive effects were largest for students performing below standards in English and those with attention deficit hyperactivity disorder, although only three studies examined

<sup>11</sup> Rocha, E. "Choosing More Time for Students: The What, Why, and How of Expanded Learning." Center for American Progress, August 2007. [https://cdn.americanprogress.org/wp-content/uploads/issues/2007/08/pdf/expanded\\_learning.pdf](https://cdn.americanprogress.org/wp-content/uploads/issues/2007/08/pdf/expanded_learning.pdf)

<sup>12</sup> Figure contents taken verbatim, with minor adaptations, from: [1] Ibid., pp. 3–5. [2] "Critical Success Factor Planning Guide: Increased Learning Time," Op. cit., p. 6.

these sub-groups. Other student groups, such as students from low-income households, did not experience improved math or literacy achievement due to ELT. An important caveat, however, is that this review primarily examined the effects of out-of-school programs—26 of the 30 studies included in the meta-analysis evaluated out-of-school and summer programs, rather than extended school days.<sup>13</sup>

Studies focusing specifically on the effects of extending the school day or school year (rather than other ELT strategies) suggest that longer school days and school years are associated with improved student achievement. A systematic review of 15 studies examining the effects of extended school days and years found that ELT is especially effective when:

- **Students are at-risk of school failure.** Several studies found that ELT was particularly effective for low-achieving students and those who are minorities and economically disadvantaged. However, nearly all of these studies were correlational in nature; in these studies, researchers were unable to rule out the possibility that other factors besides ELT resulted in changes in student achievement.<sup>14</sup>
- **Considerations are made for how time is used.** The authors of the systematic review note that the “content and instructional strategies used in school are paramount to the success or failure” of ELT. This variation in instructional content and quality may explain some variation found in student outcomes examined in ELT studies—“the effectiveness of instruction might determine whether extended school time has positive, negative, or no effects on student outcomes.”<sup>15</sup>

Researchers from the Chalkboard Project—a non-partisan, nonprofit organization that works to improve Oregon’s K-12 public schools—conducted a less formal review of the ELT literature in 2008 and came to similar conclusions. They assert that **ELT is a predictive factor of student success—but only if extended time is used well.** Academic learning time is often at-risk of being “eroded” by non-academic tasks such as announcements, roll call, assemblies, etc., or by issues such as poor instruction, ineffective classroom management, and behavioral and discipline issues. Therefore, districts must take proactive measures to ensure that ELT in fact maximizes student learning.<sup>16</sup>

### *STUDIES IN LARGE SCHOOL DISTRICTS*

**Several recent studies in large school districts have found positive outcomes associated with ELT.** In 2015, Boston Public Schools (BPS) added 40 minutes to the regular school day in 60 schools. Using an interrupted time series design, the American Institutes for Research

---

<sup>13</sup> Kidron, Y. and J. Lindsay. “The Effects of Increased Learning Time on Student Academic and Nonacademic Outcomes: Findings from a Meta-Analytic Review.” Regional Educational Laboratory Appalachia, National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education, July 2014. pp. 4–17. [https://ies.ed.gov/ncee/edlabs/regions/appalachia/pdf/REL\\_2014015.pdf](https://ies.ed.gov/ncee/edlabs/regions/appalachia/pdf/REL_2014015.pdf)

<sup>14</sup> Patall, E.A., H. Cooper, and A.B. Allen. “Extending the School Day or School Year: A Systematic Review of Research (1985-2009).” *Review of Educational Research*, 80:3, September 2010. pp. 426–428.

<sup>15</sup> *Ibid.*, p. 402.

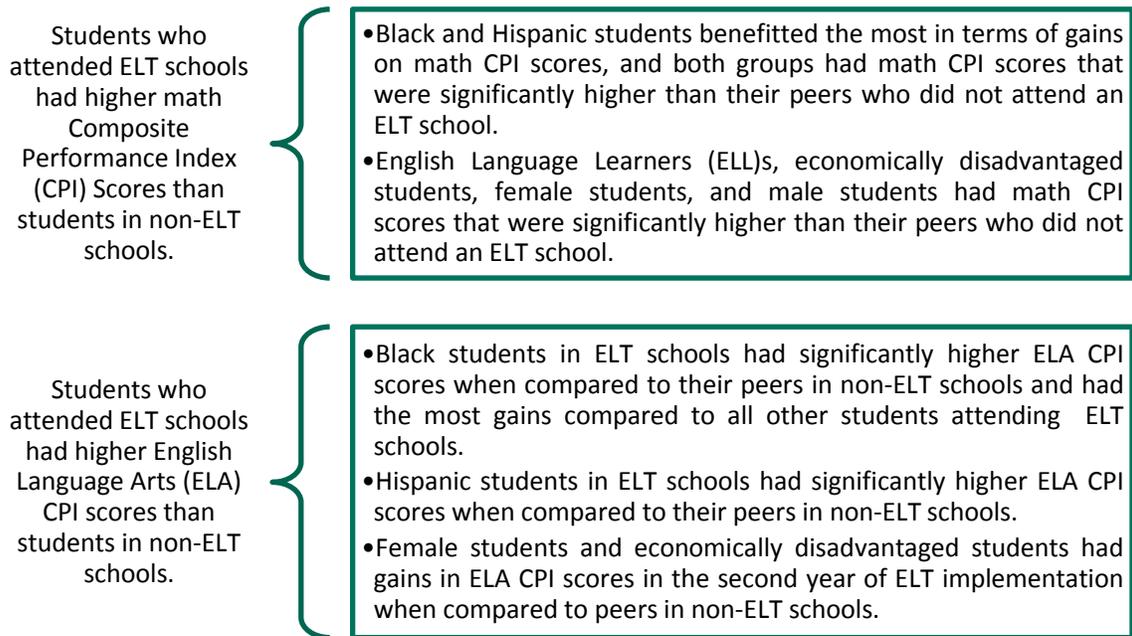
<sup>16</sup> “A Review of Research on Extended Learning Time in K-12 Schools,” *Op. cit.*, p. 2, 4.

examined changes in state test scores from 2005-06 to 2015-16 and found that ELT resulted in the following outcomes across Grades K-12:<sup>17</sup>

- Improvements in both English language arts (ELA) and math scores for black students, Hispanic students, and economically disadvantaged students.
- Improvements in math scores for English Learners.

The key findings from this study are further detailed in Figure 1.2 below.

**Figure 1.2: Key Findings from the Boston Public Schools ELT Study**



Source: Boston Public Schools and American Institutes for Research<sup>18</sup>

Studies in New York City’s charter schools have also found positive outcomes. Dr. Caroline Hoxby of Stanford University compared the outcomes of Grades 3-12 students who applied to attend a New York charter school, and were accepted, against those students who applied but did not receive an offer of admission. She found that charter school students had better outcomes for several reasons, including **a longer school year** and **a greater number of minutes devoted to English during each school day**. Students in charter schools in the city attended school, on average, for an extra two and a half weeks each year and learned English for 112 minutes of an eight-hour day.<sup>19</sup>

<sup>17</sup> “Expanded Learning Time Found to Have a Positive Impact on Student Achievement at Boston Public Schools.” Boston Public Schools and American Institutes for Research, 2016. <https://www.air.org/sites/default/files/downloads/report/Boston-Expanded-Learning-Afterschool-School-Handout-2017.pdf>

<sup>18</sup> Figure contents taken verbatim from: Ibid., p. 1.

<sup>19</sup> Bulleted text quoted verbatim from: Hoxby, C.M., S. Murarka, and J. Kang. “The New York City Charter Schools Evaluation Project: How New York City’s Charter Schools Affect Achievement.” National Center on School Choice

Another study of New York City’s charter schools, conducted by Harvard economist Dr. Roland Fryer, examined factors that were significantly associated with school effectiveness (i.e., annual gains in math and English test scores) at 35 schools. Dr. Fryer and his colleagues found that factors typically associated with student success, such as class size, per pupil expenditures, and teacher qualifications, were not the most predictive factors of school effectiveness. Rather, the study found that five factors—**increased instructional time**, frequent teacher feedback, use of data to guide instruction, high-dosage tutoring, and high student expectations—predicted roughly 50 percent of the variation in school effectiveness. High-achieving elementary schools in this study provided almost **27 percent more instruction hours** per year than the average school in the city; these high-achieving elementary schools had an average of 190.7 instructional days per year and 8.1 hours per instructional day, compared to 183.8 instructional days and 7.4 hours at other schools.<sup>20</sup>

### POTENTIAL CONCERNS ABOUT ELT



Hanover reviewed a wide range of the available literature to discern whether extended instructional days associate negatively with student outcomes. Few empirical studies identify negative outcomes associated with an extended school day.

**At worst, students may receive minimal additional academic gains, but extended school days do not detract from student outcomes.**<sup>21</sup>

Despite the lack of evidence indicating that ELT is associated with negative outcomes, teachers, parents, and students may nonetheless have concerns about extending the school day. Common concerns related to ELT are described in Figure 1.3 on the following page. Students may experience increased boredom with longer school days; there is less time for studying, extracurricular activities, or free time; teachers may experience burnout and increased work demands; parents may still have additional childcare needs unmet, even with an extended day; and the operating costs of additional teacher salaries, building maintenance, and other logistical considerations may be overwhelming for school districts.<sup>22</sup> However, these drawbacks are not quantified or standardized across districts.

---

at Vanderbilt University, Institute for Education Sciences, September 2009.

[http://users.nber.org/~schools/charterschoolseval/how\\_NYC\\_charter\\_schools\\_affect\\_achievement\\_sept2009.pdf](http://users.nber.org/~schools/charterschoolseval/how_NYC_charter_schools_affect_achievement_sept2009.pdf)

<sup>20</sup> Fryer, R.G. and W. Dobbie. “Getting Beneath the Veil of Effective Schools: Evidence from New York City.” National Bureau of Economic Research Working Papers, December 2011. pp. 2-3, 9.

<http://www.nber.org/papers/w17632.pdf>

<sup>21</sup> Patall, Cooper, and Allen, Op. cit., pp. 426–428.

<sup>22</sup> [1] Ibid., p. 406. [2] Walker, Op. cit.

**Figure 1.3: Potential Concerns About ELT**

 <p><b>Potential Negative Effects for Students</b></p> <ul style="list-style-type: none"> <li>➤ Wasted Time (as allocated time does not necessarily translate to increased instruction)</li> <li>➤ Increased fatigue</li> <li>➤ Increased boredom</li> <li>➤ Decreased effort</li> <li>➤ Increased absenteeism and drop-out rates</li> <li>➤ Less time for informal learning, extracurricular activities, student employment, and free time</li> </ul>	 <p><b>Potential Negative Effects for Instruction</b></p> <ul style="list-style-type: none"> <li>➤ Greater number of work hours</li> <li>➤ Less time off</li> <li>➤ Teacher and administrator burnout</li> </ul>
 <p><b>Potential Negative Effects for Parents</b></p> <ul style="list-style-type: none"> <li>➤ Child care needs of working parents still may not be met</li> <li>➤ May interfere with family time</li> </ul>	 <p><b>Potential Negative Effects for Society</b></p> <ul style="list-style-type: none"> <li>➤ Cost (salaries, facilities, maintenance)</li> <li>➤ Takes resources from more effective interventions (e.g., addressing instructional quality)</li> </ul>

Source: Review of Educational Research<sup>23</sup>

## PRELIMINARY ELT IMPLEMENTATION CONSIDERATIONS



The research generally suggests that extended instructional time during the school day can have significant positive implications for low-income, minority, English Learner, and otherwise disadvantaged student groups.<sup>24</sup> However, these additional hours must be used effectively—**schools should provide quality instruction and account for various factors that could negate the potential positive effects of extending the school day.**

Prior to adopting ELT schedules and instituting longer school hours, district leaders should consider how time is currently being used, gauge stakeholder perceptions, and identify the intended outcomes of increasing the length of the school day (Figure 1.4 on the following page).

<sup>23</sup> Figure contents taken verbatim, with minor adaptations, from: Patal, Cooper, and Allen, Op. cit., p. 406.

<sup>24</sup> [1] Ibid. [2] “Expanded Learning Time Found to Have a Positive Impact on Student Achievement at Boston Public Schools,” Op. cit. [3] Hoxby, Murarka, and Kang, Op. cit. [4] Rocha, Op. cit.

**Figure 1.4: Essential Guiding Questions Before Implementing ELT**

 <p><b>How is time currently used?</b></p>	<p>One common thread in increased learning time is that time in and of itself is not the solution. More time does not necessarily lead to more learning. What the school does with the time is the critical variable. This means that conversations about extended learning time should start with an introspective look at how time is used currently. (For example, how much time do students spend on tasks? How much time is spent on non-instructional activities?)</p>
 <p><b>What do stakeholders think about increased learning time?</b></p>	<p>Different communities have diverse needs and preferences when it comes to increased learning time. National data suggests there are dramatic differences in what families from diverse income brackets want and need from extended learning time programs, particularly after school. Before implementing an extended learning time program, aim to learn more about what the school community needs/prefers by soliciting stakeholder feedback through surveys and focus groups.</p>
 <p><b>What is the desired outcome?</b></p>	<p>Before saying yes to increased learning time and starting program design, be sure the district’s goals and outcomes are clear. Why is increasing learning time a good fit for this school or district? What outcomes does leadership expect? Based on these goals and outcomes, what mix of students should participate? What metrics will be used to evaluate success?</p>

Source: Texas Education Agency<sup>25</sup>

<sup>25</sup> Figure contents taken verbatim, with minor adaptations, from: “Critical Success Factor Planning Guide: Increased Learning Time,” Op. cit., p. 10.

## SECTION II: DISTRICT PROFILES

This section provides profiles of three districts that have expanded instructional time by lengthening the school day, and consequently, have seen significant improvement in student outcomes. We first profile two districts that adjusted their elementary school schedules by adding additional learning time to the school day. We then discuss concrete scheduling changes that a Boston-area middle school leadership team implemented, resulting in positive effects on student achievement.

### ORCHARD GARDENS K-8 SCHOOL



Orchard Gardens K-8 School (OGPS)—a “pilot” public school in Boston, Massachusetts—opened in 2004 and initially experienced high rates of staff turnover, as well as markedly low student performance, in its first few years of operation.<sup>26</sup> Prior to adopting an extended school day calendar, OGPS performed poorly across a series of indicators, namely, student proficiency rates on the Massachusetts Comprehensive Assessment System (MCAS) that were below 20 percent in both ELA and Math.<sup>27</sup>

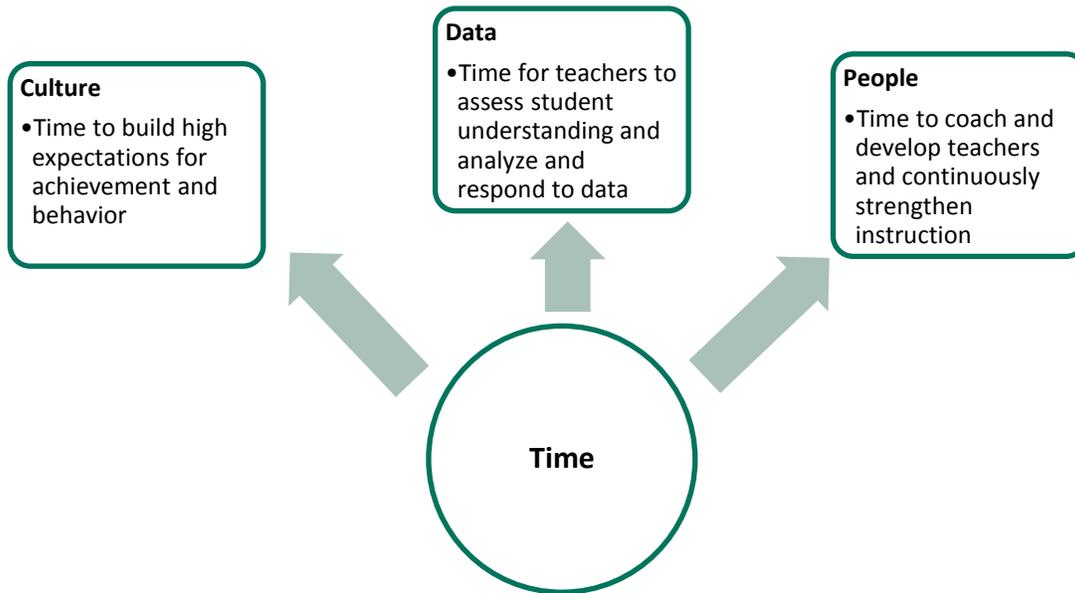
After a shift in school leadership, the new OGPS principal enacted a series of policy changes to improve student outcomes. The school improvement logic model used additional time to drive better student outcomes—leaders reasoned that additional time would better allow staff to improve the school culture, assess student performance data, and improve instruction (Figure 2.1 on the following page).

---

<sup>26</sup> Chan, R. “Transforming Schools through Expanded Learning Time: Orchard Gardens K-8 Pilot School.” National Center on Time and Learning, 2013. p. 3.  
<https://www.timeandlearning.org/sites/default/files/resources/orchardgardencasestudy.pdf>

<sup>27</sup> Chan, R. “Transforming Schools through Expanded Learning Time.” AdvancED, Spring 2012. <https://www.advanced.org/source/transforming-schools-through-expanded-learning-time>

**Figure 2.1: OGPS School Improvement Logic Model**



Source: National Center for Time and Learning<sup>28</sup>

The OGPS principal decided to extend the amount of time that students spent in both core coursework and electives by lengthening the school day.<sup>29</sup> For K-5 students, the instructional day increased by one hour. For middle school students, the school day spanned just six hours in 2009 and lengthened to nine hours and 40 minutes by 2012. On average, students in OGPS are in school for one hour more than the average Boston Public Schools student. Below, Figure 2.2 provides a sample daily schedule for a middle school student.

**Figure 2.2: Sample Middle School Student Schedule, Pre-ELT vs. ELT**

2009 PRE-ELT BELL SCHEDULE	2012 ELT BELL SCHEDULE
9:25 - 9:35, Homeroom	7:23 - 8:30, Elective
9:38 - 10:28, Science	8:32 - 10:20, ELA
10:31 - 11:21, Social Studies	10:22 - 11:15, Science
11:24 - 12:14, Specials	11:15 - 11:37, Lunch
12:17 - 12:42, Lunch	11:40 - 12:35, History
12:45 - 2:00, ELA	12:37 - 2:20, Math
2:03 - 3:21, Math	2:20 - 5:00, Citizen Schools

Source: National Center for Time and Learning<sup>30</sup>

In addition to scheduling changes, **OGPS leadership enacted a series of measures to mitigate staff turnover and improve staff morale.** With this additional time in the school day, teachers were able to receive supplemental professional development; collaborate more with

<sup>28</sup> Figure adapted from: Chan, "Transforming Schools through Expanded Learning Time: Orchard Gardens K-8 Pilot School," Op. cit., p. 4.

<sup>29</sup> Chan, "Transforming Schools through Expanded Learning Time," Op. cit.

<sup>30</sup> Figure contents taken verbatim from: Chan, "Transforming Schools through Expanded Learning Time: Orchard Gardens K-8 Pilot School," Op. cit., pp. 6, 16.

colleagues; and structure lessons to include multiple mediums of instruction.<sup>31</sup> In sum, teachers originally spent 22.6 hours per week on instruction, and 4.8 hours (on average) planning and collaborating with colleagues. According to the NCTL analysis, under the revised ELT calendar, teachers spent 22.8 hours in classroom instruction, and 10.2 hours planning and collaborating with fellow teachers.<sup>32</sup> The figure below further details the revised teacher professional development and planning schedule under the newly-adopted ELT framework.

**Figure 2.3: Sample ELA Teacher Work Week in ELT**

	Monday	Tuesday	Wednesday	Thursday	Friday
7:20 – 8:30	Instruction (Section 1)	Instruction (Section 3)	Prep	Instruction (Section 1)	Instruction (Section 1)
8:32 – 9:25		Grade Team Meeting	Grade Team Meeting	Instruction (Section 3)	
9:27 – 10:20	Prep	Instruction (Section 2)	Instruction (Section 2)	Prep	Prep
10:22 – 11:15	Prep	Instruction (Section 1)			Prep
11:17 – 12:10	Instruction (Section 2)			Prep	Instruction (Section 2)
12:10 – 12:32	Lunch				
12:35 – 1:30	Instruction (Section 3)	Instruction (Section 1)	Instruction (Section 3)	Content Team Meeting (Data Inquiry)	Instruction (Section 2)
1:32 – 2:20		Prep	Instruction (Section 1)		
2:30 – 3:00	Homeroom/ Homework	Homeroom/ Homework	Homeroom/ Homework	Homeroom/ Homework	Homeroom/ Homework

Source: National Center on Time and Learning<sup>33</sup>

**School leaders attribute significant gains in student achievement to the revised school schedule.** Measurable improvements in student outcomes include:<sup>34</sup>

- **Improved test scores.** In 2011, OGPS schoolwide MCAS proficiency rates rose in both ELA (to 30 percent proficient) and math (to 35 percent proficient) —higher than they had ever been in the school’s seven-year history. In 2012, schoolwide MCAS proficiency rates rose again, this time by 6 and 4 percent in ELA and math, respectively. This rise in MCAS scores translated to a median SGP in ELA of 70 and in math of 74, making OGPS among the top schools in all Massachusetts in terms of growth.
- **Increased student growth.** The school’s median student growth percentile (SGP)—an index that compares yearly growth in individual student MCAS scores against those of other students with similar testing backgrounds—was 63 in ELA and 79 in math. (Massachusetts considers a school with a median SGP of at least 60, in either subject, as “high growth”). In 2011, the median SGP for students at OGPS ranked better than 87 percent of schools in Massachusetts in ELA and 98 percent of schools in math.

<sup>31</sup> Chan, “Transforming Schools through Expanded Learning Time,” Op. cit.

<sup>32</sup> Chan, “Transforming Schools through Expanded Learning Time: Orchard Gardens K-8 Pilot School,” Op. cit.

<sup>33</sup> Figure contents taken verbatim from: Ibid., p. 9.

<sup>34</sup> Bulleted text quoted verbatim, with minor adaptations, from: Ibid., pp. 17–18.

## MERIDEN PUBLIC SCHOOLS



Meriden Public Schools (MPS), a public school district located in Meriden, Connecticut, enrolls disproportionate numbers of low-income, English Learner, and single-parent household students, as compared to the state of Connecticut at-large. In 2011, MPS was selected as a recipient of an American Federation of Teachers “Innovation Fund” grant, which provided funding for researchers to empirically investigate whether an ELT schedule (specifically, roughly 100 minutes of additional daily instruction) furthers public elementary student outcomes.<sup>35</sup>

The district enacted ELT across three of its elementary schools, with each school given significant autonomy to implement ELT for their specific school and community context. Thus, even though all three elementary schools added additional minutes of instruction to the daily schedule, each did so in a slightly different manner.<sup>36</sup> The John Barry Elementary School daily bell schedule is detailed below – all three elementary school daily calendars may be accessed [by clicking here](#).

**Figure 2.4: John Barry Elementary School Daily Bell Schedule for Students and Teachers**

	Student Day Grade K-2	Teacher Day Early Stagger	Student Day Grade 3-5	Teacher Day Late Stagger
7:50 a.m.	Arrival and universal breakfast	7:40 a.m. arrival 7:50 a.m. contact with students	7:50 a.m. arrival	*Intentionally left blank
8:00 a.m. – 2:25 p.m.	Core Day that includes Academic Intervention Block	Classroom and Support team teach Core Day specialist teach P.E., Technology, and Creative Arts	7:55 a.m. – 9:20 a.m. Enrichment Block and Universal Breakfast	9:20 a.m. Late stagger teachers’ day begins
2:25 p.m. – 3:50 p.m.	Enrichment Block	(2:35) Teacher Early Shift ends	9:20 a.m. – 3:50 p.m. Core Day that includes Academic Intervention Block	9:20 a.m. – 3:55 p.m. Classroom and Support team teach Core Day Specialists teach P.E., Technology, and Creative Arts
3:50 p.m. – 4:00 p.m.	Dismissal	*Intentionally left blank	Dismissal	3:55 – 4:05 p.m. Contact with students 4:15 p.m. Late shift ends

Source: American Federation of Teachers<sup>37</sup>

**Although MPS shifted to a longer school day schedule, teachers’ contract hours remained the same.** Teachers who elected to work the entirety of the ELT daily schedule were provided

<sup>35</sup> “It’s about Time: Lessons from Expanded Learning Time in Meriden, Connecticut.” American Federation of Teachers, 2014. p. 1. [https://www.aft.org/sites/default/files/if\\_itsabouttime.pdf](https://www.aft.org/sites/default/files/if_itsabouttime.pdf)

<sup>36</sup> Ibid.

<sup>37</sup> Figure contents taken verbatim from: Ibid., p. 29.

additional compensation, but most teachers operated under a “shift” schedule, whereby certain teachers arrived at school early, and others arrived later to accommodate the extra instructional time. These different shift schedules are also detailed in Figure 2.4 above.

**MPS district leaders attribute significant positive gains in student outcomes to ELT, including:**<sup>38</sup>

- **Improved attendance.** Average daily attendance increased to 98 percent, a 10 percent increase in one school. Twenty classrooms in ELT schools recorded perfect attendance.
- **Improved climate.** Student survey results show that virtually all students think their teachers are “fair, caring, and motivate them to learn.”
- **Improved student achievement.** Grade 3 and 4 students at Pulaski Elementary achieved the greatest reading growth in the district and outpaced district and state averages in math and reading.

## MATTHEW J. KUSS MIDDLE SCHOOL



Like MPS and OGPS, Matthew J. Kuss Middle School (Kuss)—located in Fall River, Massachusetts—has been profiled by several third-party education research and technical assistance organizations (including the NCTL, *Scholastic*, *Boston Globe*, *New York Times*, *USA Today*, *Washington Post*, and *Education Week*) for its extended school day schedule and positive student outcomes associated with the modified calendar.<sup>39</sup>

Prior to implementing scheduling adjustments and extending the school day, Kuss was consistently identified as an “underperforming” school.<sup>40</sup> As of 2004, Kuss was labeled a “Level 4” school,<sup>41</sup> the state of Massachusetts’s designation for those “most struggling schools based on an analysis of four-year trends in absolute achievement, student growth, and academic improvement trends.”<sup>42</sup>

Massachusetts has consistently prioritized the extension of the school day as a means of improving student outcomes and closing achievement gaps. Since 2005, the state Department of Education has awarded an additional \$1,300 per student in grants to 19 public schools across nine school districts to fund an additional 300 hours of instruction.<sup>43</sup>

---

<sup>38</sup> Bulleted text quoted verbatim, with minor adaptations, from: *Ibid.*, p. 2.

<sup>39</sup> “Kuss Middle School: Expanding Time to Accelerate School Improvement.” National Center on Time and Learning. p. 3. <https://files.eric.ed.gov/fulltext/ED534905.pdf>

<sup>40</sup> Delisio, E. “More Schools Turn to Extended Days.” Reading Rockets. <http://www.readingrockets.org/article/more-schools-turn-extended-days>

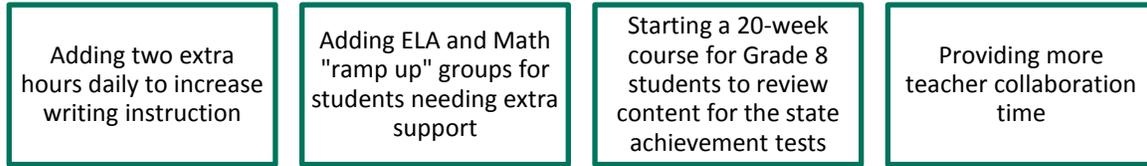
<sup>41</sup> Walker, Op. cit.

<sup>42</sup> “About Level 4 Schools and Districts.” Massachusetts Department of Elementary and Secondary Education. <http://www.doe.mass.edu/turnaround/level4/about.html>

<sup>43</sup> Schachter, R. “Extending the School Day.” Scholastic. <http://www.scholastic.com/browse/article.jsp?id=3755837>

With these additional resources, Kuss was able to implement several scheduling changes comprising the components detailed in Figure 2.5 below.

**Figure 2.5: Scheduling Policy Changes**



Source: Scholastic<sup>44</sup>

**Kuss school leaders attribute significant improvements in student achievement to their modified school day calendar.** Leaders assert that, as a result of school-wide scheduling changes, student attendance improved, tardiness rates dropped, and students could enroll in electives such as band, chorus, robotics, martial arts, ham radio, and forensics while still maintaining equal rigor in core ELA and math coursework.<sup>45</sup> Between the years of 2006 to 2010, Kuss saw the following outcomes:

- The elimination of the 28-point gap between its Grade 8 students' test scores and the state average;
- The percentage of students earning scores of "Proficient" or "Advanced" on MCAS increased by 34 points in math and 16 points in ELA; and,
- Since the 2008-2009 academic year, Kuss suspension rates decreased by 10 percent.<sup>46</sup>

The comprehensive report that details student gains attributed to the modified daily bell schedule may be accessed [by clicking here](#).

Figure 2.6 on the following page provides a sample Kuss student schedule. Classes last from 7:18 a.m. until 3:30 p.m., which amounts to slightly over **eight hours of instruction** per school day.

---

<sup>44</sup> Ibid.

<sup>45</sup> Delisio, Op. cit.

<sup>46</sup> "Kuss Middle School: Expanding Time to Accelerate School Improvement," Op. cit., p. 5.

**Figure 2.6: Sample Student Schedule, Kuss Middle School**

	Monday	Tuesday	Wednesday	Thursday	Friday	Legend
7:18 – 8:06	Core: Science	Core: Science	Core: ELA	Core: Math	Elective: Journalism	Core Subjects: ELA, Math, Science, and Social Studies
8:08 – 8:52					Math Ramp-Up	
8:54 – 9:38	Specialty: PE/Health	ELA Ramp-Up	Core: Math	Core: Science	Core Social Studies:	
9:40 – 10:24	Core: Math	Science Elective: Forensics			Core: ELA	
10:28 – 11:12		Core: Social Studies	Specialty: Art	Math Ramp-Up		
<b>Lunch</b>						
11:14 – 12:26	Core: Social Studies	Specialty: PE	Core: Social Studies	ELA Ramp-Up	Specialty: Art	Enrichment: Rotation of specialty classes (Art, Music, PE/Health, Family & Consumer Science), and enrichment activities
12:28 – 1:12	Core: ELA	Core: Math	ELA Ramp-Up	Core: ELA	Core: Science	
1:14 – 1:58			Math Ramp-Up			
2:00 – 2:44	Elective: Martial Arts	Core: ELA	Core: Science	Core: Social Studies	Core: Math	
2:46 – 3:30	Science Elective: Endangered Species					

Source: National Center on Time and Learning<sup>47</sup>

<sup>47</sup> Figure contents taken verbatim from: Ibid., p. 4.

## PROJECT EVALUATION FORM

Hanover Research is committed to providing a work product that meets or exceeds client expectations. In keeping with that goal, we would like to hear your opinions regarding our reports. Feedback is critically important and serves as the strongest mechanism by which we tailor our research to your organization. When you have had a chance to evaluate this report, please take a moment to fill out the following questionnaire.

<http://www.hanoverresearch.com/evaluation/index.php>

## CAVEAT

The publisher and authors have used their best efforts in preparing this brief. The publisher and authors make no representations or warranties with respect to the accuracy or completeness of the contents of this brief and specifically disclaim any implied warranties of fitness for a particular purpose. There are no warranties that extend beyond the descriptions contained in this paragraph. No warranty may be created or extended by representatives of Hanover Research or its marketing materials. The accuracy and completeness of the information provided herein and the opinions stated herein are not guaranteed or warranted to produce any particular results, and the advice and strategies contained herein may not be suitable for every client. Neither the publisher nor the authors shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages. Moreover, Hanover Research is not engaged in rendering legal, accounting, or other professional services. Clients requiring such services are advised to consult an appropriate professional.



4401 Wilson Boulevard, Suite 400

Arlington, VA 22203

P 202.559.0500 F 866.808.6585

[www.hanoverresearch.com](http://www.hanoverresearch.com)